



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Atty. Docket No: 5030-0001.24

In re patent application of

UNGER, EVAN C. et al.

Serial No. 09/912,609

Filed: July 25, 2001

For: NOVEL TARGETED DELIVERY SYSTEMS FOR BIOACTIVE AGENTS

#7  
AKO  
8-21-03

STATEMENT TO SUPPORT FILING AND SUBMISSION IN  
ACCORDANCE WITH 37 C.F.R. §§ 1.821-1.825

Assistant Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450  
Mail Stop SEQUENCE

Sir:

In connection with a Sequence Listing submitted concurrently herewith, the undersigned hereby states that:

1. the submission, filed herewith in accordance with 37 C.F.R. § 1.821(g), does not include new matter;

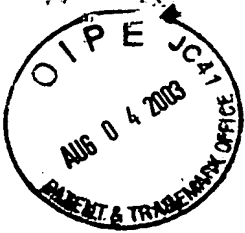
2. the content of the attached paper copy and the attached computer readable copy of the Sequence Listing, submitted in accordance with 37 C.F.R. § 1.821(c) and (e), respectively, are the same.

Respectfully submitted,

July 25, 2003  
Date

James A. Coburn  
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SEQUENCE LISTING

<110> UNGER, EVAN C.  
MATSUNAGA, TERRY ONICHI  
RAMASWAMI, VARADARAJAN  
ROMANOWSKI, MAREK J.

<120> NOVEL TARGETED DELIVERY SYSTEMS FOR BIOACTIVE AGENTS

<130> 5030-0001.24

<140> 09/912,609  
<141> 2001-07-25

<150> 09/703,474  
<151> 2000-10-31

<150> 09/478,124  
<151> 2000-01-05

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<170> PatentIn Ver. 2.1

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1 5

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Cys Asn Ser Arg Leu His Leu Arg Cys  
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<210> 4

<211> 9

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<223> Description of Artificial Sequence: Synthetic peptide

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Cys Glu Asn Trp Trp Gly Asp Val Cys  
1 5

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<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 5

Trp Arg Cys Val Leu Arg Glu Gly Pro Ala Gly Gly Cys Ala Trp Phe  
1 5 10 15

Asn Arg His Arg Leu  
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<210> 6

<211> 9

<212> PRT

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Cys Leu Ser Ser Arg Leu Asp Ala Cys  
1 5

<210> 7

<211> 7

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peptide

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Cys Leu Pro Val Ala Ser Cys  
1 5

<210> 8  
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Cys Gly Ala Arg Glu Met Cys  
1 5

<210> 9  
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peptide

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Cys Arg Gly Asp Cys  
1 5

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peptide

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Cys Arg Gly Asp Cys Leu  
1 5

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Asn Gly Arg Ala His Ala  
1 5

<210> 12  
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peptide

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Asp Gly Arg Ala His Ala  
1 5

<210> 13  
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peptide

<400> 13  
Cys Arg Gly Asp Cys Ala  
1 5

<210> 14  
<211> 6  
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peptide

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Arg Cys Asp Val Val Val  
1 5

<210> 15  
<211> 6  
<212> PRT  
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peptide

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Ser Leu Ile Asp Ile Pro  
1 5

<210> 16  
<211> 6  
<212> PRT  
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peptide

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Thr Ile Arg Ser Val Asp  
1 5

<210> 17  
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peptide

<400> 17  
Lys Arg Gly Asp  
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<210> 18  
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peptide

<400> 18  
Arg Arg Gly Asp  
1

<210> 19  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 19  
Arg Gly Asp Leu  
1

<210> 20  
<211> 11  
<212> PRT  
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<220>  
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peptide

<400> 20  
Cys Ser Phe Gly Arg Gly Asp Ile Arg Asn Cys  
1 5 10

<210> 21  
<211> 11  
<212> PRT  
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<220>  
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peptide

<400> 21  
Cys Ser Phe Gly Arg Thr Asp Gln Arg Ile Cys  
1 5 10

<210> 22  
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peptide

<400> 22  
Cys Ser Phe Gly Lys Gly Asp Asn Arg Ile Cys  
1 5 10

<210> 23  
<211> 11  
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<220>  
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<400> 23  
Cys Ser Phe Gly Arg Asn Asp Ser Arg Asn Cys  
1 5 10

<210> 24  
<211> 11  
<212> PRT  
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Cys Ser Phe Gly Arg Val Asp Asp Arg Asn Cys  
1 5 10

<210> 25  
<211> 11  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 25  
Cys Ser Phe Gly Arg Ala Asp Arg Arg Asn Cys  
1 5 10

<210> 26  
<211> 11  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 26  
Cys Ser Phe Gly Arg Ser Val Asp Arg Asn Cys  
1 5 10

<210> 27  
<211> 11  
<212> PRT  
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<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 27

Cys Ser Phe Gly Lys Arg Asp Met Arg Asn Cys  
1 5 10

<210> 28

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 28

Cys Ser Phe Gly Arg Trp Asp Ala Arg Asn Cys  
1 5 10

<210> 29

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 29

Cys Ser Phe Gly Arg Gln Asp Val Arg Asn Cys  
1 5 10

<210> 30

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 30

Cys Ser Phe Gly Arg Asp Asp Gly Arg Asn Cys  
1 5 10

<210> 31

<211> 9

<212> PRT

<213> Artificial Sequence

<220>  
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<400> 31  
 Cys Asp Cys Arg Gly Asp Cys Phe Cys  
       1                              5

<210> 32  
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<210> 33  
 <211> 13  
 <212> PRT  
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<220>  
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<400> 33  
 Cys Gly Phe Glu Cys Val Arg Gln Cys Pro Glu Arg Cys  
       1                              5                              10

<210> 34  
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<220>  
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 34  
 Cys Gly Phe Glu Leu Glu Thr Cys  
       1                              5

<210> 35  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 35

Cys Thr Leu Arg Asp Arg Asn Cys  
1 5

&lt;210&gt; 36

&lt;211&gt; 8

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 36

Cys Ile Gly Glu Val Glu Val Cys  
1 5

&lt;210&gt; 37

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 37

Cys Val Ala Leu Cys Arg Glu Ala Cys Gly Glu Gly Cys  
1 5 10

&lt;210&gt; 38

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 38

Ser Trp Cys Glu Pro Gly Trp Cys Arg  
1 5

&lt;210&gt; 39

&lt;211&gt; 7

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 39  
Tyr Ser Gly Lys Trp Gly Trp  
1 5

<210> 40  
<211> 7  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic peptide

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Gly Leu Ser Gly Gly Arg Ser  
1 5

<210> 41  
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<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 41  
Leu Met Leu Pro Arg Ala Asp  
1 5

<210> 42  
<211> 9  
<212> PRT  
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<223> Description of Artificial Sequence: Synthetic peptide

<400> 42  
Cys Arg Asp Val Val Ser Val Ile Cys  
1 5

<210> 43  
<211> 9  
<212> PRT  
<213> Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 43

Cys Ser Cys Phe Arg Asp Val Cys Cys  
1 5

&lt;210&gt; 44

&lt;211&gt; 34

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 44

Tyr Val Pro Leu Pro Asn Val Pro Gln Pro Gly Arg Arg Pro Phe Pro  
1 5 10 15Thr Phe Pro Gly Gln Gly Pro Phe Asn Pro Lys Ile Lys Trp Pro Gln  
20 25 30

Gly Tyr

&lt;210&gt; 45

&lt;211&gt; 34

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 45

Val Phe Ile Asp Ile Leu Asp Lys Val Glu Asn Ala Ile His Asn Ala  
1 5 10 15Ala Gln Val Gly Ile Gly Phe Ala Lys Pro Phe Glu Lys Leu Ile Asn  
20 25 30

Pro Lys

&lt;210&gt; 46

&lt;211&gt; 18

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 46

Gly	Asn	Asn	Arg	Pro	Val	Tyr	Ile	Pro	Gln	Pro	Arg	Pro	Pro	His	Pro
1				5					10					15	

Arg Ile

&lt;210&gt; 47

&lt;211&gt; 18

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 47

Gly	Asn	Asn	Arg	Pro	Val	Tyr	Ile	Pro	Gln	Pro	Arg	Pro	Pro	His	Pro
1				5					10					15	

Arg Leu

&lt;210&gt; 48

&lt;211&gt; 18

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 48

Gly	Asn	Asn	Arg	Pro	Ile	Tyr	Ile	Pro	Gln	Pro	Arg	Pro	Pro	His	Pro
1				5					10					15	

Arg Leu

&lt;210&gt; 49

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 49

Arg	Leu	Cys	Arg	Ile	Val	Val	Ile	Arg	Val	Cys	Arg
1				5				10			

&lt;210&gt; 50

&lt;211&gt; 42

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 50

Arg Phe Arg Pro Pro Ile Arg Arg Pro Pro Ile Arg Pro Pro Phe Tyr  
 1 5 10 15

Pro Pro Phe Arg Pro Pro Ile Arg Pro Pro Ile Phe Pro Pro Ile Arg  
 20 25 30

Pro Pro Phe Arg Pro Pro Leu Arg Phe Pro  
 35 40

&lt;210&gt; 51

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 51

Arg Arg Ile Arg Pro Arg Pro Pro Arg Leu Pro Arg Pro Arg Pro Arg  
 1 5 10 15

Pro Leu Pro Phe Pro Arg Pro Gly Pro Arg Pro Ile Pro Arg Pro Leu  
 20 25 30

Pro Phe Pro Arg Pro Gly Pro Arg Pro Ile Pro Arg Pro Leu Pro Phe  
 35 40 45

Phe Arg Pro Gly Pro Arg Pro Ile Pro Arg Pro  
 50 55

&lt;210&gt; 52

&lt;211&gt; 36

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 52

Trp Asn Pro Phe Lys Glu Leu Glu Arg Ala Gly Gln Arg Val Arg Asp  
 1 5 10 15

Ala Val Ile Ser Ala Ala Pro Ala Val Ala Thr Val Gly Gln Ala Ala  
 20 25 30

Leu Ala Arg Gly  
 35

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 <211> 37  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 peptide

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                   20                  25                  30  
 Ala Ile Ala Arg Gly  
                   35

<210> 54  
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 <212> PRT  
 <213> Artificial Sequence

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 Ala Ile Ile Ser Ala Ala Pro Ala Val Ala Thr Val Gly Gln Ala Ala  
                   20                  25                  30  
 Ala Ile Ala Arg Gly  
                   35

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<220>  
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 peptide

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 Ala Val Ile Ser Ala Ala Pro Ala Val Ala Thr Val Gly Gln Ala Ala  
                   20                  25                  30  
 Ala Ile Ala Arg Gly Gly  
                   35



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 <213> Artificial Sequence

<220>  
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 peptide

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 Gly Ile Gly Ala Leu Ser Ala Lys Gly Ala Leu Lys Gly Leu Ala Lys  
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Gly Leu Ala Glx His Phe Ala Asn  
                     20

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 <211> 27  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 peptide

<400> 57  
 Gly Ile Gly Ala Ser Ile Leu Ser Ala Gly Lys Ser Ala Leu Lys Gly  
     1                    5                    10                    15

Leu Ala Lys Gly Leu Ala Glu His Phe Ala Asn  
                     20                    25

<210> 58  
 <211> 27  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 peptide

<400> 58  
 Gly Ile Gly Ser Ala Ile Leu Ser Ala Gly Lys Ser Ala Leu Lys Gly  
     1                    5                    10                    15

Leu Ala Lys Gly Leu Ala Glu His Phe Ala Asn  
                     20                    25

<210> 59  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 59

Ile	Lys	Ile	Thr	Thr	Met	Leu	Ala	Lys	Leu	Gly	Lys	Val	Leu	Ala	His
1					5				10					15	

Val

&lt;210&gt; 60

&lt;211&gt; 17

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 60

Ser	Lys	Ile	Thr	Asp	Ile	Leu	Ala	Lys	Leu	Gly	Lys	Val	Leu	Ala	His
1				5					10					15	

Val

&lt;210&gt; 61

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 61

Arg	Pro	Asp	Phe	Cys	Leu	Glu	Pro	Pro	Tyr	Thr	Gly	Pro	Cys	Lys	Ala
1				5					10					15	

Arg	Ile	Ile	Arg	Tyr	Phe	Tyr	Asn	Ala	Lys	Ala	Gly	Leu	Cys	Gln	Thr
			20					25					30		

Phe	Val	Tyr	Gly	Gly	Cys	Arg	Ala	Lys	Arg	Asn	Asn	Phe	Lys	Ser	Ala
		35					40					45			

Glu	Asp	Cys	Met	Arg	Thr	Cys	Gly	Gly	Ala
	50					55			

&lt;210&gt; 62

&lt;211&gt; 24

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 62

Phe Leu Pro Leu Leu Ala Gly Leu Ala Ala Asn Phe Leu Pro Lys Ile  
 1 5 10 15

Phe Cys Lys Ile Thr Arg Lys Cys  
 20

&lt;210&gt; 63

&lt;211&gt; 33

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 63

Gly Ile Met Asp Thr Leu Lys Asn Leu Ala Lys Thr Ala Gly Lys Gly  
 1 5 10 15

Ala Leu Gln Ser Leu Leu Asn Lys Ala Ser Cys Lys Leu Ser Gly Gln  
 20 25 30

Cys

&lt;210&gt; 64

&lt;211&gt; 37

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 64

Lys Trp Lys Leu Phe Lys Lys Ile Glu Lys Val Gly Gln Asn Ile Arg  
 1 5 10 15

Asp Gly Ile Ile Lys Ala Gly Pro Ala Val Ala Val Val Gly Gln Ala  
 20 25 30

Thr Gln Ile Ala Lys  
 35

&lt;210&gt; 65

&lt;211&gt; 35

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 65

Lys Trp Lys Val Phe Lys Lys Ile Glu Lys Met Gly Arg Asn Ile Arg  
 1 5 10 15

Asn Gly Ile Val Lys Ala Gly Pro Ala Ile Ala Val Leu Gly Glu Ala  
 20 25 30

Lys Ala Leu  
 35

&lt;210&gt; 66

&lt;211&gt; 40

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 66

Gly Trp Leu Lys Lys Leu Gly Lys Arg Ile Glu Arg Ile Gly Gln His  
 1 5 10 15

Thr Arg Asp Ala Thr Ile Gln Gly Leu Gly Ile Ala Gln Gln Ala Ala  
 20 25 30

Asn Val Ala Ala Thr Ala Arg Gly  
 35 40

&lt;210&gt; 67

&lt;211&gt; 36

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 67

Trp Asn Pro Phe Lys Glu Leu Glu Lys Val Gly Gln Arg Val Arg Asp  
 1 5 10 15

Ala Val Ile Ser Ala Gly Pro Ala Val Ala Thr Val Ala Gln Ala Thr  
 20 25 30

Ala Leu Ala Lys  
 35

&lt;210&gt; 68

&lt;211&gt; 31

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 68

Ser Trp Leu Ser Lys Thr Ala Lys Lys Leu Glu Asn Ser Ala Lys Lys  
 1 5 10 15

Arg Ile Ser Glu Gly Ile Ala Ile Ala Ile Gln Gly Gly Pro Arg  
 20 25 30

&lt;210&gt; 69

&lt;211&gt; 37

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 69

Glx Phe Thr Asn Val Ser Cys Thr Thr Ser Lys Glu Cys Trp Ser Val  
 1 5 10 15

Cys Gln Arg Leu His Asn Thr Ser Arg Gly Lys Cys Met Asn Lys Lys  
 20 25 30

Cys Arg Cys Tyr Ser  
 35

&lt;210&gt; 70

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 70

Phe Leu Pro Leu Ile Leu Arg Lys Ile Val Thr Ala Leu  
 1 5 10

&lt;210&gt; 71

&lt;211&gt; 35

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 71

Leu Arg Asp Leu Val Cys Tyr Cys Arg Ser Arg Gly Cys Lys Gly Arg  
 1 5 10 15

Glu Arg Met Asn Gly Thr Cys Arg Lys Gly His Leu Leu Tyr Thr Leu  
                   20                  25                  30

Cys Cys Arg  
           35

<210> 72  
 <211> 35  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
           peptide

<400> 72  
 Leu Arg Asp Leu Val Cys Tyr Cys Arg Thr Arg Gly Cys Lys Arg Arg  
   1                  5                  10                  15

Glu Arg Met Asn Gly Thr Cys Arg Lys Gly His Leu Met Tyr Thr Leu  
                   20                  25                  30

Cys Cys Arg  
           35

<210> 73  
 <211> 33  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
           peptide

<400> 73  
 Val Val Cys Ala Cys Arg Arg Ala Leu Cys Leu Pro Arg Glu Arg Arg  
   1                  5                  10                  15

Ala Gly Phe Cys Arg Ile Arg Gly Arg Ile His Pro Leu Cys Cys Arg  
                   20                  25                  30

Arg

<210> 74  
 <211> 33  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
           peptide

&lt;400&gt; 74

Val	Val	Cys	Ala	Cys	Arg	Arg	Ala	Leu	Cys	Leu	Pro	Leu	Glu	Arg	Arg
1				5					10					15	

Ala	Gly	Phe	Cys	Arg	Ile	Arg	Gly	Arg	Ile	His	Pro	Leu	Cys	Cys	Arg
			20					25					30		

Arg

&lt;210&gt; 75

&lt;211&gt; 31

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 75

Arg	Arg	Cys	Ile	Cys	Thr	Thr	Arg	Thr	Cys	Arg	Phe	Pro	Tyr	Arg	Arg
1				5					10					15	

Leu	Gly	Thr	Cys	Ile	Phe	Gln	Asn	Arg	Val	Tyr	Thr	Phe	Cys	Cys	
			20					25					30		

&lt;210&gt; 76

&lt;211&gt; 31

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 76

Arg	Arg	Cys	Ile	Cys	Thr	Thr	Arg	Thr	Cys	Arg	Phe	Pro	Tyr	Arg	Arg
1				5					10					15	

Leu	Gly	Thr	Cys	Leu	Phe	Gln	Asn	Arg	Val	Tyr	Thr	Phe	Cys	Cys	
			20					25					30		

&lt;210&gt; 77

&lt;211&gt; 30

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 77

Ala	Cys	Tyr	Cys	Arg	Ile	Pro	Ala	Cys	Ile	Ala	Gly	Glu	Arg	Arg	Tyr
1				5					10					15	

Gly Thr Cys Ile Tyr Gln Gly Arg Leu Trp Ala Phe Cys Cys  
                             20                            25                            30

<210> 78

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 78

Cys Tyr Cys Arg Ile Pro Ala Cys Ile Ala Gly Glu Arg Arg Tyr Gly  
   1                            5                            10                            15

Thr Cys Ile Tyr Gln Gly Arg Leu Trp Ala Phe Cys Cys  
                             20                            25

<210> 79

<211> 33

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 79

Val Val Cys Ala Cys Arg Arg Ala Leu Cys Leu Pro Arg Glu Arg Arg  
   1                            5                            10                            15

Ala Gly Phe Cys Arg Ile Arg Gly Arg Ile His Pro Leu Cys Cys Arg  
                             20                            25                            30

Arg

<210> 80

<211> 33

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 80

Val Val Cys Ala Cys Arg Arg Ala Leu Cys Leu Pro Leu Glu Arg Arg  
   1                            5                            10                            15

Ala Gly Phe Cys Arg Ile Arg Gly Arg Ile His Pro Leu Cys Cys Arg  
                             20                            25                            30

Arg



<210> 81  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 peptide

<400> 81  
 Val Thr Cys Tyr Cys Arg Arg Thr Arg Cys Gly Phe Arg Glu Arg Leu  
   1                  5                  10                  15  
 Ser Gly Ala Cys Gly Tyr Arg Gly Arg Ile Tyr Arg Leu Cys Cys Arg  
                   20                  25                  30

<210> 82  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 peptide

<400> 82  
 Val Thr Cys Tyr Cys Arg Ser Thr Arg Cys Gly Phe Arg Glu Arg Leu  
   1                  5                  10                  15  
 Ser Gly Ala Cys Gly Tyr Arg Gly Arg Ile Tyr Arg Leu Cys Cys Arg  
                   20                  25                  30

<210> 83  
 <211> 38  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 peptide

<400> 83  
 Asp Phe Ala Ser Cys His Thr Asn Gly Gly Ile Cys Leu Pro Asn Arg  
   1                  5                  10                  15  
 Cys Pro Gly His Met Ile Gln Ile Gly Ile Cys Phe Arg Pro Arg Val  
                   20                  25                  30  
 Lys Cys Cys Arg Ser Trp  
                   35

<210> 84  
 <211> 40  
 <212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 84

Val Arg Asn His Val Thr Cys Arg Ile Asn Arg Gly Phe Cys Val Pro  
1 5 10 15

Ile Arg Cys Pro Gly Arg Thr Arg Gln Ile Gly Thr Cys Phe Gly Pro  
20 25 30

Arg Ile Lys Cys Cys Arg Ser Trp  
35 40

<210> 85

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 85

Asn Pro Val Ser Cys Val Arg Asn Lys Gly Ile Cys Val Pro Ile Arg  
1 5 10 15

Cys Pro Gly Ser Met Lys Gln Ile Gly Thr Cys Val Gly Arg Ala Val  
20 25 30

Lys Cys Cys Arg Lys Lys  
35

<210> 86

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 86

Ala Thr Cys Asp Leu Leu Ser Gly Thr Gly Ile Asn His Ser Ala Cys  
1 5 10 15

Ala Ala His Cys Leu Leu Arg Gly Asn Arg Gly Gly Tyr Cys Asn Gly  
20 25 30

Lys Ala Val Cys Val Cys Arg Asn  
35 40

<210> 87  
 <211> 38  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 87  
 Gly Phe Gly Cys Pro Leu Asp Gln Met Gln Cys His Arg His Cys Gln  
     1                    5                    10                    15  
 Thr Ile Thr Gly Arg Ser Gly Gly Tyr Cys Ser Gly Pro Leu Lys Leu  
                     20                    25                    30  
 Thr Cys Thr Cys Tyr Arg  
                     35

<210> 88  
 <211> 38  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 88  
 Gly Phe Gly Cys Pro Leu Asn Gln Gly Ala Cys His Arg His Cys Arg  
     1                    5                    10                    15  
 Ser Ile Arg Arg Arg Gly Gly Tyr Cys Ala Gly Phe Phe Lys Gln Thr  
                     20                    25                    30  
 Cys Thr Cys Tyr Arg Asn  
                     35

<210> 89  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 89  
 Ala Leu Trp Lys Thr Met Leu Lys Lys Leu Gly Thr Met Ala Leu His  
     1                    5                    10                    15  
 Ala Gly Lys Ala Ala Leu Gly Ala Ala Asp Thr Ile Ser Gln Thr Gln  
                     20                    25                    30

<210> 90  
 <211> 19  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 90  
 Gly Lys Pro Arg Pro Tyr Ser Pro Arg Pro Thr Ser His Pro Arg Pro  
     1                    5                    10                    15

Ile Arg Val

<210> 91  
 <211> 46  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 91  
 Gly Ile Phe Ser Lys Leu Gly Arg Lys Lys Ile Lys Asn Leu Leu Ile  
     1                    5                    10                    15

Ser Gly Leu Lys Asn Val Gly Lys Glu Val Gly Met Asp Val Val Arg  
                     20                    25                    30

Thr Gly Ile Asp Ile Ala Gly Cys Lys Ile Lys Gly Glu Cys  
           35                    40                    45

<210> 92  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 92  
 Ile Leu Pro Trp Lys Trp Pro Trp Trp Pro Trp Arg Arg  
     1                    5                    10

<210> 93  
 <211> 25  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 93

Phe Lys Cys Arg Arg Trp Gln Trp Arg Met Lys Lys Leu Gly Ala Pro  
 1 5 10 15

Ser Ile Thr Cys Val Arg Arg Ala Pro  
 20 25

&lt;210&gt; 94

&lt;211&gt; 34

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 94

Ile Thr Ser Ile Ser Leu Cys Thr Pro Gly Cys Lys Thr Gly Ala Leu  
 1 5 10 15

Met Gly Cys Asn Met Lys Thr Ala Thr Cys His Cys Ser Ile His Val  
 20 25 30

Ser Lys

&lt;210&gt; 95

&lt;211&gt; 34

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 95

Thr Ala Gly Pro Ala Ile Arg Ala Ser Val Lys Gln Cys Gln Lys Thr  
 1 5 10 15

Leu Lys Ala Thr Arg Leu Phe Thr Val Ser Cys Lys Gly Lys Asn Gly  
 20 25 30

Cys Lys

&lt;210&gt; 96

&lt;211&gt; 56

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 96

Met Ser Lys Phe Asp Asp Phe Asp Leu Asp Val Val Lys Val Ser Lys  
 1 5 10 15

Gln Asp Ser Lys Ile Thr Pro Gln Trp Lys Ser Glu Ser Leu Cys Thr  
 20 25 30

Pro Gly Cys Val Thr Gly Ala Leu Gln Thr Cys Phe Leu Gln Thr Leu  
 35 40 45

Thr Cys Asn Cys Lys Ile Ser Lys  
 50 55

&lt;210&gt; 97

&lt;211&gt; 37

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 97

Lys Tyr Tyr Gly Asn Gly Val His Cys Thr Lys Ser Gly Cys Ser Val  
 1 5 10 15

Asn Trp Gly Glu Ala Phe Ser Ala Gly Val His Arg Leu Ala Asn Gly  
 20 25 30

Gly Asn Gly Phe Trp  
 35

&lt;210&gt; 98

&lt;211&gt; 23

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 98

Gly Ile Gly Lys Phe Leu His Ser Ala Gly Lys Phe Gly Lys Ala Phe  
 1 5 10 15

Val Gly Glu Ile Met Lys Ser  
 20

&lt;210&gt; 99

&lt;211&gt; 23

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 99

Gly	Ile	Gly	Lys	Phe	Leu	His	Ser	Ala	Lys	Lys	Phe	Gly	Lys	Ala	Phe
1				5					10					15	

Val	Gly	Glu	Ile	Met	Asn	Ser
			20			

&lt;210&gt; 100

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 100

Gly	Met	Ala	Ser	Lys	Ala	Gly	Ala	Ile	Ala	Gly	Lys	Ile	Ala	Lys	Val
1				5				10						15	

Ala	Leu	Lys	Ala	Leu
			20	

&lt;210&gt; 101

&lt;211&gt; 24

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 101

Gly	Val	Leu	Ser	Asn	Val	Ile	Gly	Tyr	Leu	Lys	Lys	Leu	Gly	Thr	Gly
1				5				10						15	

Ala	Leu	Asn	Ala	Val	Leu	Lys	Gly
				20			

&lt;210&gt; 102

&lt;211&gt; 25

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 102

Gly	Trp	Ala	Ser	Lys	Ile	Gly	Gln	Thr	Leu	Gly	Lys	Ile	Ala	Lys	Val
1				5				10						15	

Gly Leu Lys Glu Leu Ile Gln Pro Lys  
                   20                  25

<210> 103  
 <211> 14  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
           peptide

<400> 103  
 Ile Asn Leu Lys Ala Leu Ala Ala Leu Ala Lys Lys Ile Leu  
   1                  5                  10

<210> 104  
 <211> 26  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
           peptide

<400> 104  
 Gly Ile Gly Ala Val Leu Lys Val Leu Thr Thr Gly Leu Pro Ala Leu  
   1                  5                  10                  15

Ile Ser Trp Ile Lys Arg Lys Arg Gln Gln  
                   20                  25

<210> 105  
 <211> 40  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
           peptide

<400> 105  
 Ala Thr Cys Asp Leu Leu Ser Gly Thr Gly Ile Asn His Ser Ala Cys  
   1                  5                  10                  15

Ala Ala His Cys Leu Leu Arg Gly Asn Arg Gly Gly Tyr Cys Asn Gly  
                   20                  25                  30

Lys Gly Val Cys Val Cys Arg Asn  
           35                  40



<210> 106  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 peptide

<400> 106  
 Ala Thr Cys Asp Leu Leu Ser Gly Thr Gly Ile Asn His Ser Ala Cys  
           1                  5                  10                  15  
 Ala Ala His Cys Leu Leu Arg Gly Asn Arg Gly Gly Tyr Cys Asn Arg  
                   20                  25                  30  
 Lys Gly Val Cys Val Arg Asn  
                   35

<210> 107  
 <211> 18  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 peptide

<400> 107  
 Arg Arg Trp Cys Phe Arg Val Cys Tyr Arg Gly Phe Cys Tyr Arg Lys  
           1                  5                  10                  15  
 Cys Arg

<210> 108  
 <211> 18  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 peptide

<400> 108  
 Arg Arg Trp Cys Phe Arg Val Cys Tyr Lys Gly Phe Cys Tyr Arg Lys  
           1                  5                  10                  15  
 Cys Arg

<210> 109  
 <211> 18  
 <212> PRT  
 <213> Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 109

Arg	Gly	Gly	Arg	Leu	Cys	Tyr	Cys	Arg	Arg	Arg	Phe	Cys	Val	Cys	Val
1				5				10						15	

Gly Arg

&lt;210&gt; 110

&lt;211&gt; 16

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 110

Arg	Gly	Gly	Arg	Leu	Cys	Tyr	Cys	Arg	Arg	Arg	Phe	Cys	Ile	Cys	Val
1				5				10						15	

&lt;210&gt; 111

&lt;211&gt; 18

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 111

Arg	Gly	Gly	Gly	Leu	Cys	Tyr	Cys	Arg	Arg	Arg	Phe	Cys	Val	Cys	Val
1				5				10						15	

Gly Arg

&lt;210&gt; 112

&lt;211&gt; 51

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 112

Val	Thr	Cys	Asp	Leu	Leu	Ser	Phe	Lys	Gly	Gln	Val	Asn	Asp	Ser	Ala
1				5				10						15	

Cys	Ala	Ala	Asn	Cys	Leu	Ser	Leu	Gly	Lys	Ala	Gly	Gly	His	Cys	Glu
			20					25					30		

Lys Gly Val Cys Ile Cys Arg Lys Thr Ser Phe Lys Asp Leu Trp Asp  
                   35                                  40                                  45

Lys Tyr Phe  
           50

<210> 113  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
           peptide

<400> 113  
 Gly Trp Leu Lys Lys Ile Gly Lys Lys Ile Glu Arg Val Gly Gln His  
   1                                  5                                  10                                  15

Thr Arg Asp Ala Thr Ile Gln Gly Leu Gly Ile Ala Gln Gln Ala Ala  
                   20                                  25                                  30

Asn Val Ala Ala Thr Ala Arg  
                   35

<210> 114  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
           peptide

<400> 114  
 Gly Trp Leu Lys Lys Ile Gly Lys Lys Ile Glu Arg Val Gly Gln His  
   1                                  5                                  10                                  15

Thr Arg Asp Ala Thr Ile Gln Val Ile Gly Val Ala Gln Gln Ala Ala  
                   20                                  25                                  30

Asn Val Ala Ala Thr Ala Arg  
                   35

<210> 115  
 <211> 47  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
           peptide

&lt;400&gt; 115

Ser Asp Glu Lys Ala Ser Pro Asp Lys His His Arg Phe Ser Leu Ser  
 1 5 10 15

Arg Tyr Ala Lys Leu Ala Asn Arg Leu Ala Asn Pro Lys Leu Leu Glu  
 20 25 30

Thr Phe Leu Ser Lys Trp Ile Gly Asp Arg Gly Asn Arg Ser Val  
 35 40 45

&lt;210&gt; 116

&lt;211&gt; 17

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 116

Lys Trp Cys Phe Arg Val Cys Tyr Arg Gly Ile Cys Tyr Arg Arg Cys  
 1 5 10 15

Arg

&lt;210&gt; 117

&lt;211&gt; 17

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 117

Arg Trp Cys Phe Arg Val Cys Tyr Arg Gly Ile Cys Tyr Arg Lys Cys  
 1 5 10 15

Arg

&lt;210&gt; 118

&lt;211&gt; 46

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide

&lt;400&gt; 118

Lys Ser Cys Cys Lys Asp Thr Leu Ala Arg Asn Cys Tyr Asn Thr Cys  
 1 5 10 15

Arg Phe Ala Gly Gly Ser Arg Pro Val Cys Ala Gly Ala Cys Arg Cys  
 20 25 30

Lys Ile Ile Ser Gly Pro Lys Cys Pro Ser Asp Tyr Pro Lys  
                   35                  40                  45

<210> 119  
 <211> 23  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
           peptide

<400> 119  
 Gly Gly Lys Pro Asp Leu Arg Pro Cys Ile Ile Pro Pro Cys His Tyr  
   1                  5                  10                  15  
 Ile Pro Arg Pro Lys Pro Arg  
                   20

<210> 120  
 <211> 63  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
           peptide

<400> 120  
 Val Lys Asp Gly Tyr Ile Val Asp Asp Val Asn Cys Thr Tyr Phe Cys  
   1                  5                  10                  15  
 Gly Arg Asn Ala Tyr Cys Asn Glu Glu Cys Thr Lys Leu Lys Gly Glu  
                   20                  25                  30  
 Ser Gly Tyr Cys Gln Trp Ala Ser Pro Tyr Gly Asn Ala Cys Tyr Cys  
                   35                  40                  45  
 Lys Leu Pro Asp His Val Arg Thr Lys Gly Pro Gly Arg Cys His  
   50                  55                  60

<210> 121  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
           peptide

<400> 121  
 Gly Gly Gly Arg Gly Asp Ser  
   1                  5

<210> 122  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic DNA  
 sequence

<400> 122  
 ggcggtggga gaggagatag t 21

<210> 123  
 <211> 1701  
 <212> DNA  
 <213> Homo sapiens

<400> 123  
 aagcttcccc aaatctcctg cctccccacg ctgagttatc cgatgtctga aatgtcacag 60  
 cacttagtct tactcttcta tggcctactt tctactgcta tttgtgttac tcatgctacc 120  
 catcttatct ccctcagtggt gtgagacgct ggcacagat ttggcatctc ccacacactc 180  
 aacattatgt gttgcacaca gtaggtactc aatacatgca agttttctga atagatatatt 240  
 tcctagtcat ctgtggcacc tgctatatcc tactgaaaat taccaaaatg caattaactt 300  
 caattttaca tttgggattt acagaaaata actctctctc caagaaatgc ataacaattt 360  
 agctagggca aatgccagggt ccgagtttaag acattaatgc gcttcgatcg cgataaggat 420  
 ttatccttat ccccatcctc atctttctgc gtcgtctaata tcaagttagg tcagtaaagg 480  
 aaaccttttc gtttttagcaa cccaatctgc tccccctctc tggcctcttt ctctcctttt 540  
 gttggtagac gacttcagcc tctgtccttt aattttaaag tttatgcccc acttgtaccc 600  
 ctctgtctttt ggtgatttag agattttcaa agcctgctct gacacagact ctctccttga 660  
 ttgcaacttc tctacttttg ggtggaaacg gcttctccgt tttgaaacgc tagcggggaa 720  
 aaaaatggggg agaaagttag gtttaaactt ttaaaagttag agtcacgggt ggttgccgag 780  
 caaaagcccc gcagtgtgga gaaagcctaa acgtggtttg ggtggtgctg ggggtgggag 840  
 ggggtgactt ttgggggata aggggagggtg gagccagggt aatgccaaag ccctgccgag 900  
 gcctccgagc gcgcgccccg gcccctcgcc tctccccgc ccccgactga ggccgggctc 960  
 cccgcccagc tgatgtcgcg cgcttgctgt ttgtggccga accgccgaac tcagaggccg 1020  
 gccccagaaa acccgagcga gtagggggcg gcgcgcagga gggaggagaa ctggggggcg 1080  
 gggaggctgg tgggtgtggg ggggtggagat gtagaagatg tgacgccgag gcccggcgag 1140  
 tgccagatta gcggacggtg cccgcggttg caacgggatc ccgggagctg cagcttggga 1200  
 ggccgctctc ccagggcggt gtccgcggag acaccatcc gtgaacccca ggtcccgggc 1260  
 cgccggctcg ccgcgcacca ggggcccggc gacagaagag cggccgagcg gctcagaggct 1320  
 gggggaccgc gggcgcgcc gcgcgctgcc gggcgaggag ctggggggcc ggggcccggg 1380  
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